

es of the  
bus which drives the slave devices.

Detailed Description Text - DETX (382):

The same plus and minus signal lines connected to the bus provide receive signals which can be received by the line receiver portion of U49, as shown in FIG. 83. The output of the line receiver drives optical isolator U53. U53 then provides receive signals RXDN to the node. The received signals also ~~drive another~~ portion of retriggerable one shot U51. This provides an uninterrupted sourcing current to a light emitting diode or other indicator to show that the node is receiving data. It should be noted that the retriggerable one shots provide uninterrupted current to the transmit and receive indicators, so that the indicators remain constantly illuminated while data transitions are occurring in the transmission or reception of data. This is different from conventional approaches in which the LED or other indicator is flashed as signals are transmitted and received. This flashing introduces noise currents which do not occur in the present invention.

Detailed Description Text - DETX (383):

It should be noted that the fig

102(b)

L Number	Hits	Search Text	DB	Time stamp
7	68	data near5 security same indicat\$4.ab.	USPAT	2004/08/03 15:27
8	19	data near5 security same (indicator\$1 or indication\$1).ab.	USPAT	2004/08/03 15:32
9	0	data near5 security same (prevent\$4) near15 indicator\$1	USPAT	2004/08/03 15:33
10	0	data near5 security same (prevent\$4) near5 theft near15 indicator\$1	USPAT	2004/08/03 15:33
11	0	data near5 security same (prevent\$4) near5 theft near25 indicator\$1	USPAT	2004/08/03 15:34
12	0	(prevent\$4) near5 theft near10 data near25 indicator\$1	USPAT	2004/08/03 15:34
13	0	(prevent\$4) near5 theft near15 data near25 indicator\$1	USPAT	2004/08/03 15:34
14	89	data near15 (theft or security) near25 indicator\$1	USPAT	2004/08/03 15:35
15	87	data near15 (theft or security) near20 indicator\$1	USPAT	2004/08/03 15:35
16	80	data near15 (theft or security) near15 indicator\$1	USPAT	2004/08/03 15:35
17	18	data near15 (theft or security).ab. and (data near15 (theft or security) near15 indicator\$1)	USPAT	2004/08/03 15:35
18	12	(data near15 (theft or security).ab. and (data near15 (theft or security) near15 indicator\$1)) not (data near5 security same (indicator\$1 or indication\$1).ab.)	USPAT	2004/08/03 15:46
19	0	4941174.pn. and "102"	USPAT	2004/08/03 15:47
20	0	4941174.pn. and (led\$1 or "102")	USPAT	2004/08/03 15:47
21	1	4941174.pn.	USPAT	2004/08/03 15:50
22	42	(data or security) near5 (leak\$4 or breach\$4) near25 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:56
23	12397	(filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:57
24	10942	(filter\$4 or lpf or isolat\$4) near10 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:57
25	10474	(filter\$4 or lpf or isolat\$4) near10 (indicator\$1 or led)	USPAT	2004/08/03 15:58
26	9463	(filter\$4 or lpf or isolat\$4) near8 (indicator\$1 or led)	USPAT	2004/08/03 15:58
27	7245	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led)	USPAT	2004/08/03 15:58
28	366	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led).ab.	USPAT	2004/08/03 15:58
29	1	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led).ab.)	USPAT	2004/08/03 15:59
30	62	and data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1))	USPAT	2004/08/03 16:00
31	5	and data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1))	USPAT	2004/08/03 16:02
32	3	same data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near15 (indicator\$1) same data near8 (security or theft or leak\$4)	USPAT	2004/08/03 16:03
33	61	(filter\$4 or lpf or isolat\$4) near15 (indicator\$1) and data near8 (security or theft or leak\$4)	USPAT	2004/08/03 16:04
34	58	((filter\$4 or lpf or isolat\$4) near15 (indicator\$1) and data near8 (security or theft or leak\$4)) not ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1) same data near8 (security or theft or leak\$4))	USPAT	2004/08/03 16:26
35	9	((("6115713") or ("5884072") or ("5598566") or ("5550980") or ("5552044") or ("5511188") or ("5463735") or ("5444851") or ("5384697"))).PN.	USPAT	2004/08/03 16:27

36	8	((("6115713") or ("5884072") or ("5598566") or ("5550980") or ("5552044") or ("5511188") or ("5463735") or ("5444851") or ("5384697")).PN.) and (retrigger\$ or led\$1)	USPAT	2004/08/03 16:30
37	0	340/\$.ccls. and (retriggerable adj one-shot) near3 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:30
38	1	340/\$.ccls. and (retriggerable adj one-shot) near10 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:32
39	1	340/\$.ccls. and (retriggerable adj one-shot) near15 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:32
40	2	340/\$.ccls. and (retriggerable adj one-shot) near20 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:38
41	1	(retrigger\$ adj (one adj shot or one-shot) near20 (status or transmit\$4)) near3 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:39

US-PAT-NO: 6115713

DOCUMENT-IDENTIFIER: US 6115713 A

TITLE: Networked facilities management system

----- KWIC -----

Brief Summary Text - BSTX (231):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode and excessive differential-mode noise to ground. Optical isolators provided isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDS.

Detailed Description

*Come See me.*  
*Don't throw these away !!!*

*Ben*

US-PAT-NO: 5884072

DOCUMENT-IDENTIFIER: US 5884072 A

TITLE: Networked facilities management system  
with updated data based on aging time

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descriptio

US-PAT-NO: 5598566

DOCUMENT-IDENTIFIER: US 5598566 A  
\*\*See image for Certificate of Correction\*\*

TITLE: Networked facilities management system  
having a node  
configured with distributed load  
management software to  
manipulate loads controlled by other  
nodes

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Description

US-PAT-NO: 5550980

DOCUMENT-IDENTIFIER: US 5550980 A

TITLE: Networked facilities management system  
with optical coupling of local network devices

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descriptio

US-PAT-NO: 5522044

DOCUMENT-IDENTIFIER: US 5522044 A

TITLE: Networked facilities management system

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descripti



US-PAT-NO: 5511188

DOCUMENT-IDENTIFIER: US 5511188 A

TITLE: Networked facilities management system  
with time stamp  
comparison for data base updates

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descriptio

US-PAT-NO: 5463735

DOCUMENT-IDENTIFIER: US 5463735 A

TITLE: Method of downloading information  
stored in an archiving device to destination network  
controller through intermediate network controllers in  
accordance with routing information

----- KWIC -----

Abstrac

US-PAT-NO: 5444851

DOCUMENT-IDENTIFIER: US 5444851 A

TITLE: Method of accessing configured nodes  
in a facilities management system with a non-configured  
device

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descriptio

US-PAT-NO: 5384697

DOCUMENT-IDENTIFIER: US 5384697 A

TITLE: Networked facilities management system  
with balanced differential analog control outputs

----- KWIC -----

Brief Summary Text - BSTX (226):

Still other aspects of the above objects of the invention are accomplished by a customized optical interface to a local optical bus compatible with the RS/485 Electronic Industries Association specification. The interface employs bias circuitry which is used to "swamp out" differential mode noise on the leads of the bus and transorb and MOV circuitry to shunt common mode voltage and excessive differential-mode noise to ground. Optical isolators provide isolation between digital and communications power supplies and retriggerable one shots are used to activate data transmission and reception indicators such as LEDs.

Detailed Descriptio

seconds and divisible by twelve.

Detailed Description Text - DETX (406):

The optical isolation portion of the node has several optical isolators. Optical isolator U50 has two parts. A first part of the optical isolator is responsive to transmit signal TXDN. This signal drives one portion of the pair of optical isolators in U50. The output of this first portion drives a line transmitter in U49, which as FIG. 83 shows contains a line transmitter and a line receiver. In addition, retriggerable one shot U51 responds to the transmit signal TXDN to source a current to an LED or other indicator which indicates that the node is transmitting data. In the transmit mode, a line transmitter portion of U49 provides signals to the plus and minus lines of the bus which drives the slave devices.

Detailed Description Text - DETX (407):

The same plus

US-PAT-NO: 4631542

DOCUMENT-IDENTIFIER: US 4631542 A

TITLE: Police radar warning receiver with  
mute function

----- KWIC -----

Detailed Description Text - DETX (16):

In order to prevent re-energization of the alarm indicator during only a temporary hiatus of alarm condition, such as would occur with pulsed radar or where the radar signal fades in or out, alarm condition detector 15 includes a retriggerable one-shot (not shown) which maintains the alarm condition signal on output 16 for the duration of an alarm condition and for approximately four seconds thereafter. Thus, until four seconds has elapsed after an alarm condition actually ceases, output 16 will remain low, thus maintaining a disable signal on output 32. Once that interval has elapsed, output 32 returns to the enable signal state and alarm 50 will once again be energized when output 16 again assumes the alarm condition state.

Current US Cross Reference Classification - CCXR (1):

340/50

US-PAT-NO: 4402034

DOCUMENT-IDENTIFIER: US 4402034 A

TITLE: Polarity sensitive solid state relay

----- KWIC -----

Detailed Description Text - DETX (27):

As has been mentioned, the output pulse level detectors 107 and 117 are identical and therefore the circuitry is shown only for the detector 107. The level detection is accomplished by the differential amplifier formed by the transistors Q3 and Q4 for the positive level pulse detector 107. The base of transistor Q4 is tied to a reference potential formed by the resistor voltage divider R11 and R12. R11 must be a decreasing only failure mode resistor and R12 must be an increasing only failure mode resistor. This provides fail-safe conditions and under failure conditions, the reference voltage and the detection threshold can then only increase. R8 must also be an increasing only failure mode resistor. When the input voltage to transistor Q3 is less than the threshold voltage, transistor Q3 is off while transistors Q4 and Q5 are held on. When the input voltage exceeds the reference voltage, transistor Q3 turns on and transistors Q4 and Q5 turn off. The circuit output is taken from the collector of transistor Q5 and is a sequence of negative going pulses at the frequency of the drive signal provided by the multivibrator 131. The retriggerable one-shot 108 is used to widen the pulse lengths in order to provide sufficient energy to drive the LED, which is a light emitting diode, to provide a visual indication of circuit operations. As

e  
appropriate security codes, which are continuously stored in the down-loading machine 26.

Detailed Description Text - DETX (62):

The audit controller 20 of the present embodiment can be used with EAROM modules 24 and with "intelligent" modules, referred to as probes (not shown), which communicate using an infrared data link. For this purpose, the central processor 702 is connected via an interface 720 to a socket 722 for the EAROM of the module 24. The processor is also connected via an input controller 724 to circuits 726 for transmitting and receiving data via the infrared data link. The input control circuit 724 is itself controlled by the output of a port expander 728 connected to various inputs, indicators, etc. via an opto-isolator interface 730 and driver circuitry 732.

Detailed Description Text - DETX (77):

Assuming that all the data has been transferred correctly, the processor then stores an



36	8	((("6115713") or ("5884072") or ("5598566") or ("5550980") or ("5552044") or ("5511188") or ("5463735") or ("5444851") or ("5384697")).PN.) and (retrigger\$ or led\$1)	USPAT	2004/08/03 16:30
37	0	340/\$.ccls. and (retriggerable adj one-shot) near3 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:30
38	1	340/\$.ccls. and (retriggerable adj one-shot) near10 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:32
39	1	340/\$.ccls. and (retriggerable adj one-shot) near15 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:32
40	2	340/\$.ccls. and (retriggerable adj one-shot) near20 (indicator\$1 or led\$1)	USPAT	2004/08/03 16:32

L Number	Hits	Search Text	DB	Time stamp
7	68	data near5 security same indicat\$4.ab.	USPAT	2004/08/03 15:27
8	19	data near5 security same (indicator\$1 or indication\$1).ab.	USPAT	2004/08/03 15:32
9	0	data near5 security same (prevent\$4) near15 indicator\$1	USPAT	2004/08/03 15:33
10	0	data near5 security same (prevent\$4) near5 theft near15 indicator\$1	USPAT	2004/08/03 15:33
11	0	data near5 security same (prevent\$4) near5 theft near25 indicator\$1	USPAT	2004/08/03 15:34
12	0	(prevent\$4) near5 theft near10 data near25 indicator\$1	USPAT	2004/08/03 15:34
13	0	(prevent\$4) near5 theft near15 data near25 indicator\$1	USPAT	2004/08/03 15:34
14	89	data near15 (theft or security) near25 indicator\$1	USPAT	2004/08/03 15:35
15	87	data near15 (theft or security) near20 indicator\$1	USPAT	2004/08/03 15:35
16	80	data near15 (theft or security) near15 indicator\$1	USPAT	2004/08/03 15:35
17	18	data near15 (theft or security).ab. and (data near15 (theft or security) near15 indicator\$1)	USPAT	2004/08/03 15:35
18	12	(data near15 (theft or security).ab. and (data near15 (theft or security) near15 indicator\$1)) not (data near5 security same (indicator\$1 or indication\$1).ab.)	USPAT	2004/08/03 15:46
19	0	4941174.pn. and "102"	USPAT	2004/08/03 15:47
20	0	4941174.pn. and (led\$1 or "102")	USPAT	2004/08/03 15:47
21	1	4941174.pn.	USPAT	2004/08/03 15:50
22	42	(data or security) near5 (leak\$4 or breach\$4) near25 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:56
23	12397	(filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:57
24	10942	(filter\$4 or lpf or isolat\$4) near10 (indicator\$1 or led\$1)	USPAT	2004/08/03 15:57
25	10474	(filter\$4 or lpf or isolat\$4) near10 (indicator\$1 or led)	USPAT	2004/08/03 15:58
26	9463	(filter\$4 or lpf or isolat\$4) near8 (indicator\$1 or led)	USPAT	2004/08/03 15:58
27	7245	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led)	USPAT	2004/08/03 15:58
28	366	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led).ab.	USPAT	2004/08/03 15:58
29	1	(filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led).ab.)	USPAT	2004/08/03 15:59
30	62	and data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1))	USPAT	2004/08/03 16:00
31	5	and data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near5 (indicator\$1 or led) and ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1 or led\$1))	USPAT	2004/08/03 16:02
32	3	same data near8 (security or theft or leak\$4) (filter\$4 or lpf or isolat\$4) near15 (indicator\$1) same data near8 (security or theft or leak\$4)	USPAT	2004/08/03 16:03
33	61	(filter\$4 or lpf or isolat\$4) near15 (indicator\$1) and data near8 (security or theft or leak\$4)	USPAT	2004/08/03 16:04
34	58	((filter\$4 or lpf or isolat\$4) near15 (indicator\$1) and data near8 (security or theft or leak\$4)) not ((filter\$4 or lpf or isolat\$4) near15 (indicator\$1) same data near8 (security or theft or leak\$4))	USPAT	2004/08/03 16:26
35	9	((("6115713") or ("5884072") or ("5598566") or ("5550980") or ("5552044") or ("5511188") or ("5463735") or ("5444851") or ("5384697"))).PN.	USPAT	2004/08/03 16:27